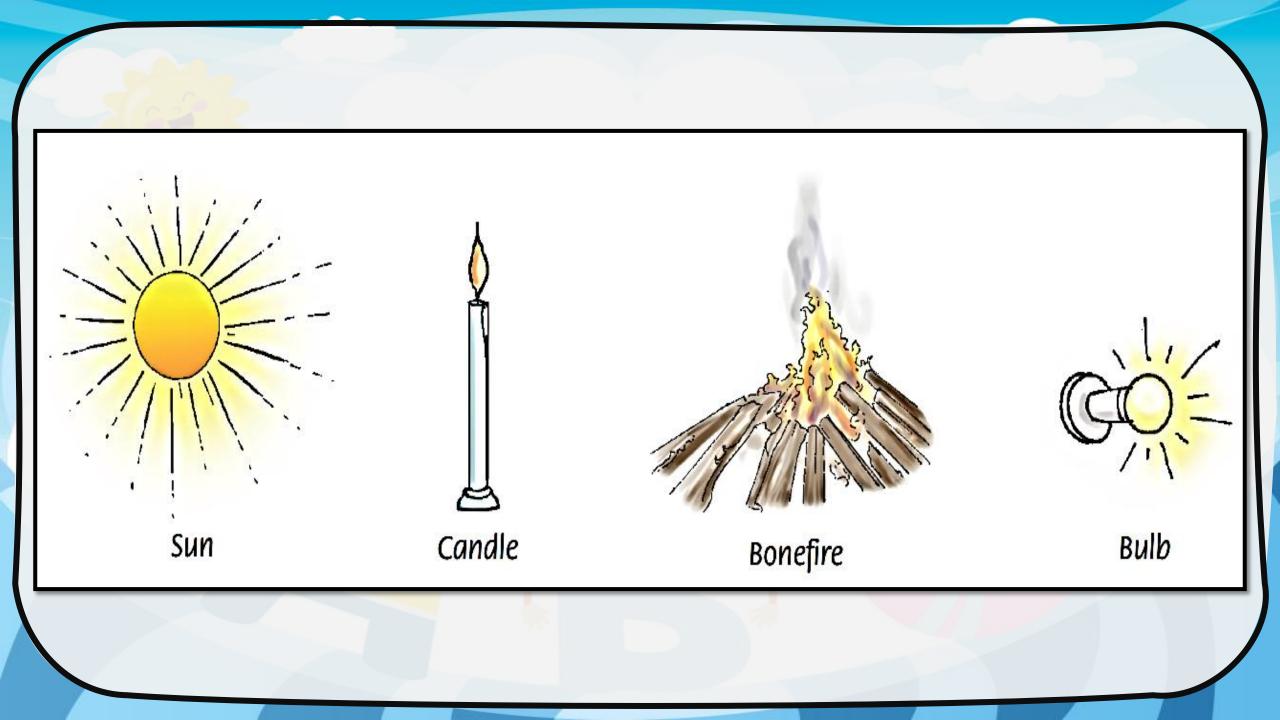


LIGHT

Light is very important for us. We can see things only when there is light. The sun is the natural source of light. Plants also cannot make their food without sunlight. This shows that we are completely dependent on light for all the necessary activities.

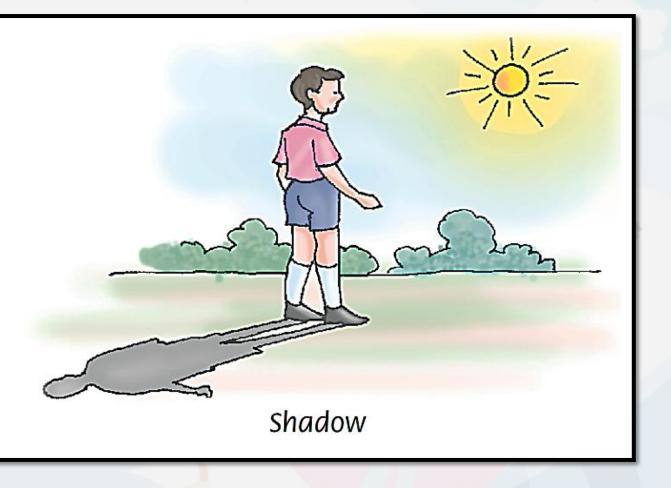




Throw torchlight on a wall standing close to it. Now move away from the wall. The lighted area gets larger and dull. This experiment shows that in the same manner though the sun shines at a distance but can spread its light, all over the earth.

What is Shadow?

The shadow is formed when the path of light gets blocked. The solid things can block the path of light. When solid things block the path of light their shadow is formed. Few of the things, allow light to pass



through them, e.g. glass. These things are called transparent.



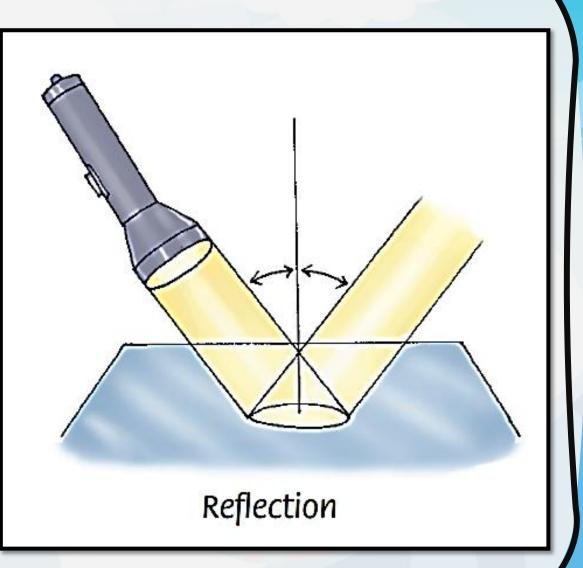
Throw torchlight on a wall. Keep your hand between the torch and the wall.

What do you see? You will see the shadow of your hand. It is of the same shape as your own hand. The shadow becomes bigger or smaller as your

hand comes closer to the light or moves away from the light respectively.

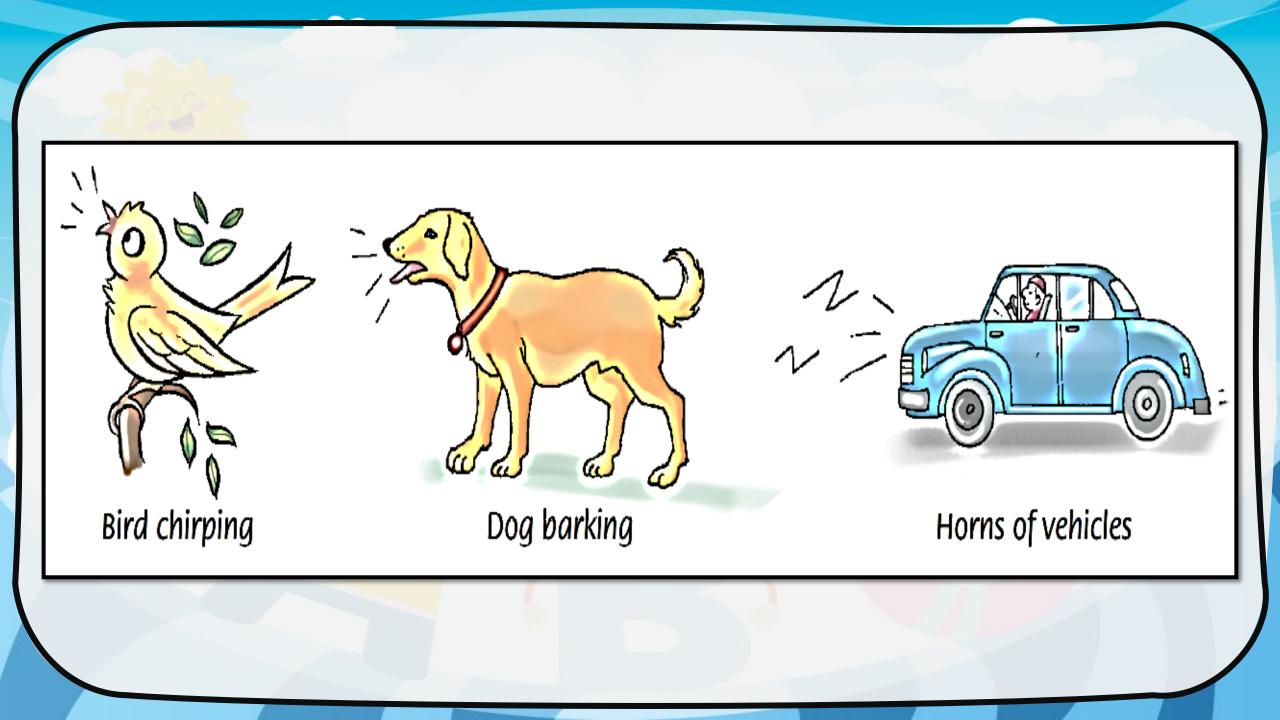
How do we see things?

We need light to see things. Lighting a candle gives light in dark. When light falls on any object, it bounces off. When this bounced light falls on our eyes, we see the things. Similarly when the moon bounces the sunlight to our eyes, we see the moon. This bouncing of light is called Reflection.



SOUND

The world around us is full of noise. We hear the birds' chirping, dogs' barking and the sounds of horns of moving vehicles. Beat the drum. We can hear the sound it makes. The string and the skin of the drum produce sound by moving back and forth very fast. This movement is called Vibration. All sounds are produced by vibration of some material.





Put some grains of rice on the skin of drum and then beat the skin.

What do you observe? The rice grains jump off with the beat. Can you tell

why?

Pluck the strings of a guitar. Hear the sound it produces. Observe the

strings carefully. Can you tell why does it look hazy?

Some sounds like chirping of the bird or soft music are very pleasant. Some sounds like burning of the firecrackers, thunder etc. are very unpleasant. They may even damage your ears. This behaviour of the sound depends upon the source which is producing it.

FORCE/ENERGY

When you push a toy car, it moves.

When you push the door it opens and

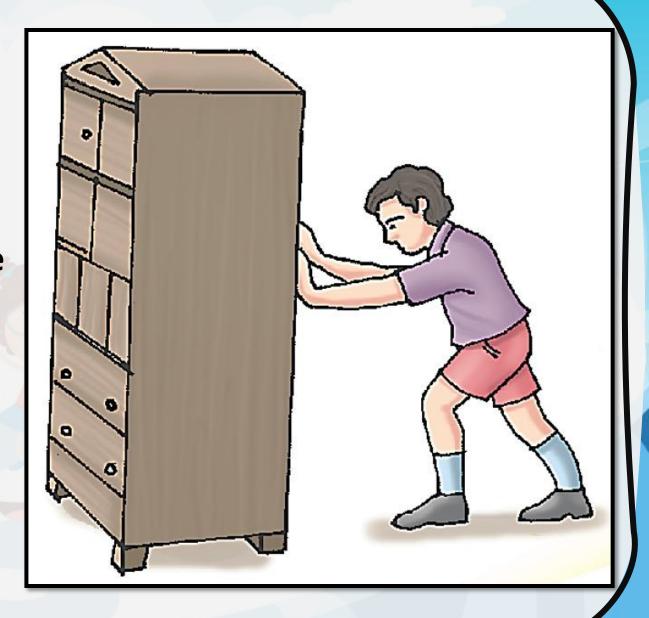
when you pull it, it is closed.



Things move when we pull or push them. This pull or push is called force.



Thus, we conclude that it is the force that moves things. To move light things we exert less force while to move heavy things we need to exert more force.



When we move something, we exert force and some work is done. **Energy is required to do work.** We get energy from food. Machines doing work need energy and they get it from fuel like petrol, diesel, and batteries.



Check Your Knowledge

Choose the correct answer.

1. The shadow becomes bigger/smaller as the object moves towards light.

2. The candle/candy gives light.

3. The drum produces sound due to vibration/reflection.



A force is the push or pull that acts on the object.

Force requires energy. Energy is the ability to do work.



- We see things when things reflect light to our eyes.
- I Shadows are formed when the path of light gets blocked.
- I We need energy to do work.